



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Inventors	:	Taiichi Okada	Docket No.:	TIP-04-1178
	:	Isso Saito		
Title	:	COATED BASE FABRIC FOR AIRBAG AND METHOD FOR MANUFACTURING THE SAME	Confirmation No.:	2464

Declaration of Tatsuro Mizuki Under C.F.R. §1.132

Commissioner for Patents
P.O. Box 1450
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Sir:

I, Tatsuro Mizuki, declare that I reside at Aichi, Japan, I am an inventor of Japanese Patent Publication No. JP 07-252740 A which is cited in the extant Official Action dated November 2, 2006. I have for 21 years been employed by Toray Industries and for 5 years worked in the art relating to airbags. I am familiar with the art relating to processes for producing yarn and fabrics for airbags.

I studied the cited references in this Application and provide comments distinguishing the claimed subject matter from JP 07-252740 A.

1. A COATED OR NON-COATED BASE FABRIC FOR AIRBAG MADE OF THE FLATTENED CROSS-SECTION YARNS

I described in JP 07-252740 A that the invention of JP 07-252740 A was effective in both non-coated airbags and coated airbags. However, I had not expected to coat base fabric for airbags made of the flattened cross-section yarns.

In those days, one skilled in the art understood that the coated base fabric did not satisfy low permeability, flexibility, and lightweight properties at the same time. Furthermore, I had not considered a resin elastomer, nor an amount of such a resin elastomer.

That is, I had not expected to obtain an excellent "coated" base fabric for airbags, having good properties of complete air-permeability, flexibility and containability that could not be attained by any conventional non-coated or coated base fabrics for airbags.

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2. THE NUMBER OF ENTANGLEMENTS

I did not describe the number of entanglements both in the filaments of the yarns in the base fabric and in the filaments of the yarns in JP 07-252740 A.

(1) In the filaments of the yarns:

The number of entanglements in the filaments of the yarns in JP 07-252740 A was from 30/m to 36/m. The individual values of Example 1,2 and Comparative Example 1,2 are shown in the following Table. These were a result of the same evaluation method as used in this Application. The evaluation method is as follows.

Number of entanglements:

According to a water-dipping method, the number of entanglement points that have length of at least 1 mm of a sample is measured, and the number thereof per m of the sample is derived from it. Ten yarns are analyzed, and their data are averaged.

The water bath has a length of 70 cm, a width of 15 cm and a depth of 5 cm. This is partitioned at 10 cm from each end in the longitudinal direction, and filled with pure water. Yarns samples are dipped in it, and the number of entanglements of each sample is measured. To remove the influence of impurities such as oil on the measurement, the pure water in the bath is exchanged for fresh water for every measurement.

Table

	The number of entanglements in the filaments of the yarns(/m)
Example 1	36
Comparative Example 1	34
Example 2	32
Comparative Example 2	30

Since I thought that the number of entanglements in the filaments of the yarns(/m) was not important, I did not describe this aspect in JP 07-252740 A. This was because it had been obvious for one of ordinary skill in the art to use the yarns having high and strength entanglements when producing non-coated fabric for airbags.

(2) In the filaments of the yarns in the base fabric:

I had not recognized the importance of the number of entanglements in the filaments of the yarns in the base fabric. Thus, I did not address those properties in JP 07-252740 A. Furthermore, I did not recognize entirely that these entanglement properties could have affected the amount of resin elastomer.

The undersigned declares that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and thus such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: January 30, 2007

Tatsuro Mizuki
Tatsuro Mizuki

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